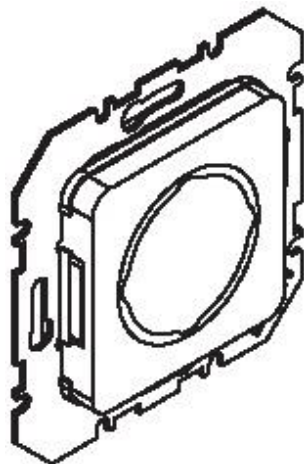


## Operating instructions

Wall scanner antennas  
ES645x, ES745x





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# 1 Introduction

## About these instructions

These instructions contain important notes and information on operation of the wall scanner antennas ES645xU and ES745xU.

- Read through the instructions carefully and attentively.
- Keep the instructions in a safe place and pass them on to each subsequent user of the wall scanner antennas.

## Explanation of the Symbols and Signal Words Used

 WARNING	Indicates risks which could result in fatal or severe personal injuries.
 CAUTION	Indicates risks which could result in fatal or severe personal injuries.
CAUTION	Indicates risks which could result in damage to property.
Note	Denotes information, notes and tips on optimum use of the instructions and the product.

## Target group

These instructions are directed at competent personnel entrusted with the servicing, maintenance and disposal of trouble-free operation of the wall scanner antennas and who has successfully completed suitable vocational training for these activities or has had the necessary appropriate experience.

## OPERTIS Support

If you have any questions extending beyond the information provided in these instructions, please contact

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## Up-to-date status of the information

All details on the product, images, dimensions and models correspond to the status at the time the product is delivered. We reserve the right to make changes due to technical progress and the resulting continuous improvement process to which our products are subjected.

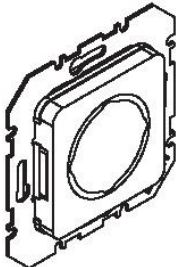
The current version of these instructions and further information is also available on our internet site [www.opertis.de](http://www.opertis.de).

Dated 07/2013

## 2 Product Description

### Overview

The following wall scanner antennas are described in these instructions:

Art. No. / Name	Drawing
ES6450U ES7450U Wall scanner antenna (internal area)	
ES6451U ES7451U Wall scanner antenna (external area)	

### Functional principle

The OPERTIS eLOCK lock system ensures continuous public and commercial building fitout. Special fitting solutions are available for different door types.

The wall scanner antenna consists of one read-out unit only. A connected wall scanner control is required for operation of the wall scanner antenna. The power supply is provided through the wall scanner control.

The wall scanner antenna is solely for data transfer and signalling. All security-relevant functions, e.g. evaluation of the communication with the identifier or control of the relay are performed by the wall scanner control. The data between the wall scanner antenna and wall scanner control is transferred in encrypted form. This ensures the highest possible protection against manipulation is achieved.

Management and programming of the fittings, among other things the issue of access authorisations, takes place using the eLOCK Center management software. Optionally, programming with eLOCK AddDelete is also possible via three programming keys without additional software.

Passive identifiers without their own power supply are available for authorisation at the fittings in the eLOCK lock system in different forms such as keys, key fobs, cards or customer-specific forms. These must be held on the wall scanner antenna for an authorisation check.

## Detailed information

Further information on the product is given in Section 8 "Product Specifications".

# 3 Intended Use

## Area of use

The wall scanner antennas are used solely together with OPERTIS wall scanner controls.

The wall scanner antennas are suitable for installation in flush-mounted boxes (surface installation is possible with special spacer frames).

## Condition of the product

Wall scanner antennas may only be used if they are in a technically perfect condition.

Independent modifications and changes to the product are not allowed.

## Ambient conditions

Use in a particularly polluted environment, e.g. in aggressive gases or in extreme temperatures, is not allowed. Special wall scanner antennas and covers are available for use in the external area of the building, in damp rooms as well as in dusty environments. If you have any questions, please contact OPERTIS Support.

## Residual risk

If used properly and if the maintenance instructions are followed, this product will support your property security.

However, the following residual risks cannot be excluded:

- In the event of failure of the mains power supply there is a risk of locking in or out. In this case the door can only be opened with mechanical aids. In this case, please contact OPERTIS Support.
- In the event of failure of the electronics or the connection cable to the wall scanner control there is a risk of locking in or out. The door can then only be opened with mechanical aids. In this case, contact OPERTIS Support.
- If a wall scanner antenna is used to control access to a fuse box and a fuse is defective there is risk of locking in or out. The door can then only be opened with mechanical aids.

## 4 Safety Instructions

The following safety instructions must be read and followed before use! OPERTIS does not accept any liability whatsoever for personal losses or injuries or damage to property caused by failure to note and follow these instructions!



### **CAUTION**

#### **Risk of locking in or out**

The door cannot be opened without a fully functional wall scanner antenna in conjunction with a door locking mechanism, if the latch drops into the lock.

Leave the door open during installation of the wall scanner antenna or ensure that the door can be opened at any time without using the wall scanner.



### **CAUTION**

#### **Risk of malfunctions**

Malfunctions can occur if the wall scanner antenna is installed in the immediate vicinity of electromagnetic alternating fields (e.g. transformer stations, MRI scanners, etc.) as well as transmitter systems.

Before installing, check whether any of the aforementioned interference factors can influence the function of the wall scanner.

### **CAUTION**

#### **Risk of damage to property**

Electronic components can be irreparably damaged if touched.

Note and observe the regulations and notes in the DIN EN 61340-5-2 standard!

Carry out installation and maintenance work only if the power supply is switched off.

Note and observe the VDE Guidelines (VDE-0100)!

## 5 Use and Operation

### Programming fittings and identifiers

Fittings and identifiers are programmed using the eLOCK Center management centre or the eLOCK AddDelete system.

Detailed information on this is given in the eLOCK system documentation software.

### Acoustic and visual signals

The acoustic and visual signals of the wall scanner antenna depends on the programming. The programmed fittings in the AddDelete system and the fittings programmed using eLOCK Center have a different signalling concept.

#### Note

The complete visual and acoustic signals are included in the eLOCK system documentation "Signalling Concept" section.

The wall scanner antenna emits acoustic and visual signals for certain system states and events:

Visual signal	Acoustic signal	Meaning
red flashing	-	Wall scanner ready for use.
2x short blue-blue	1x ascending sound sequence	Programming mode on.
blue flashing	-	Programming mode active.
–	1x descending sound sequence	End of programming mode (automatic)
2x short green-green	1x short high-pitch	Wall scanner connection by authorised identifier
2x short red-red	1x long low-pitch	No wall scanner connection, identifier not authorised
2x red-green	1x short high-pitch	Wall scanner connection in construction site mode or permanent release mode, see eLOCK system documentation "Fitting Modes" section.



Visual signal	Acoustic signal	Meaning
2x short red-red 4 x yellow	1x long low-pitch+ 4x short low-pitch	System error! Dismantle wall scanner, contact ES Support!

## 6 Servicing, Cleaning and Maintenance

The servicing, cleaning and maintenance may be carried out by qualified personnel only.

Warranty cover is excluded for damage caused by improper handling.

### Intervals

Activity	Interval
Servicing	1 year

### Cleaning and maintenance

Cleaning and maintenance of the wall scanner antenna is not necessary.

### Servicing



#### CAUTION

#### Risk of locking in or out

The door cannot be opened without a fully functional fitting, if the latch drops into the lock.

Perform functional tests with the door open.

The following functional tests must be performed once a year:

Step	Activity	Result
1	Hold an authorised OPERTIS identifier in front of the connected antenna/s of the wall scanner control.	The connected peripheral device opens for the duration of the defined opening time. The wall scanner antenna signals as specified, see section "Acoustic and visual signals".
2	Read fitting info, check time and date, see eLOCK system documentation.	If necessary, reset time and date, see eLOCK system documentation software.

## 7 Problems and Solutions

Problem	Possible cause	Solution
Identifier is not recognised (no positive or negative acknowledgement).	Identifier is defective.	Replace identifier.
	Wall scanner antenna is defective.	Replace wall scanner control.
Identifier is not given access.	Identifier is not programmed or does not have the necessary authorisations.	Program identifier, see eLOCK system documentation software.
	Wall scanner time is incorrect.	Reset time, see eLOCK system documentation.
Wall scanner antenna has no ready signal.	Connection cable to the control is defective or is not connected.	Ensure connection with control.
	Wall scanner control is defective.	Replace wall scanner control.
	Wall scanner antenna is defective.	Replace wall scanner antenna.
	Relay has already picked up.	Wait for relay to drop out.
Wall scanner antenna temporarily does not function, no signalling.	If several wall scanner antennas are connected communication is taking place at another antenna (authorisation of an identifier or programming procedure).	Wait for communication procedure at the other wall scanner antenna to end.
Wall scanner antenna is not recognised by the wall scanner control.	Several connected wall scanner antennas have the same addressing.	Adjust addressing. Each addressing (1-9) may only be used once.
	Terminating resistances are incorrectly set.	Correctly set terminating resistances.
Each identifier is authorised to lock.	Fitting is not programmed ("construction site mode").	Program fitting, see eLOCK system documentation software.

## 8 Product Specifications

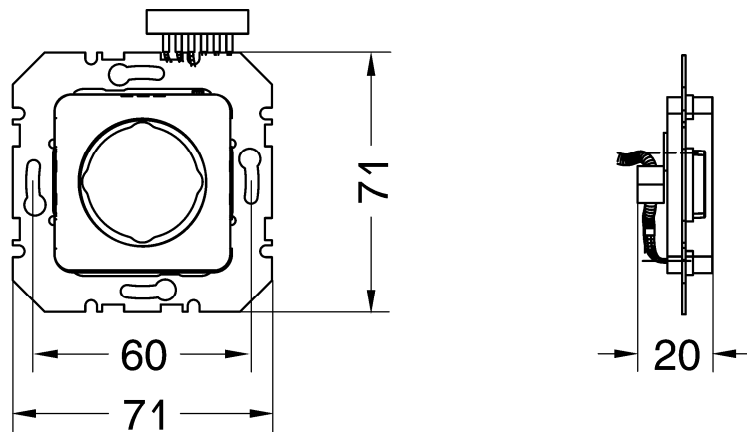
### Declaration of conformity

OPERTIS GmbH herewith declares that the Wall Scanner Antennas fulfil the basic standards and other relevant specifications of the 1999/5/EG and 2011/65/EU directives and that they are CE compliant.

A copy of the statement of conformity can be ordered from the OPERTIS Support.

### Dimensions

All dimensions are given in mm.



## Technical data

### Installation environment

Mounting depth	≥ 20 mm
Installation diameter	≥ 53 mm or standard concealed, flush-type boxes with 60 mm fixing centres
Mounting distance between wall scanner antennas	At least 150 mm in 3D space

### Power supply / connections

Power supply	<p>The wall scanner antenna is supplied with voltage through the wall scanner control.</p> <p>Operation of more than 3 antennas in total via one wall scanner control is only possible with an additional external power supply, 9 V DC.</p>
External antennas	<ul style="list-style-type: none"> <li>○ A maximum of 6 external antennas can be connected to a wall scanner control without internal antenna.</li> <li>○ A maximum of 5 external antennas can be connected to a wall scanner control with internal antenna.</li> </ul>
Connection cable	<p>single core or litz wire 0.24 - 1.5mm<sup>2</sup></p> <p>Length of stripped insulation 6 - 9 mm</p>
Length of the connection cable of external antennas	≤ 300m (series connection)
Pin assignment	See installation instructions.

### Specific data

Operating temperature	-20 °C to +55 °C
Storage temperature	-40 °C to +85 °C
Air humidity for operation and storage	max. 95 % non-condensing
Use	<p>ES6450U / ES7450U: (internal area)</p> <p>ES6451U / ES7451U: (external area)</p>

## 9 Disposal

### Product



Disposal in accordance with WEEE Directive 2012/19/EU:

- Do not dispose of product by throwing it in the local household waste.
- Return product to OPERTIS or dispose of at a municipal collection point for hazardous electrical wastes.







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